CLAIMS

What is claimed is:

1. An optical pickup comprising:

a light source which emits light;

a grating which separates a portion of the light emitted from the light source;

a reflecting member which reflects another portion of the light emitted from the light source;

a monitoring photodetector disposed on a traveling path of the light reflected from the reflecting member and which measures the reflected light;

an optical path changer which changes an optical path of the light separated by the grating;

an objective lens which condenses the light the optical path of which is changed onto a disc; and

a signal detecting photodetector which receives the light reflected from the disc.

2. The optical pickup of claim 1, wherein the light source is a laser diode.

3. The optical pickup of claim 1, wherein the grating has an effective aperture through which the portion of the light which is separated passes, wherein any portion of the light traveling outside of the effective aperture is ineffective light, and wherein the reflecting member is disposed on an optical path of at least a portion of the ineffective light and reflects the least a portion of the ineffective light.

4. The optical pickup of claim 1, wherein the reflecting member is disposed around the grating.

5. The optical pickup of claim 1, wherein the reflective member is a mirror.

6. The optical pickup of claim 1, wherein the reflecting member is disposed only in a portion of a peripheral portion of the grating.

7. The optical pickup of claim 1, wherein the optical path changer is one of a beam splitter which reflects or transmits incident light by a ratio according to a reflective coating of the beam splitter and a polarized beam splitter which reflects or transmits incident light according to a polarization direction of the incident light.

8. The optical pickup of claim 1, wherein the signal detecting photodetector detects a focusing servo signal and a tracking servo signal from the received reflected light.

9. The optical pickup of claim 1, further comprising a collimating lens which is disposed on an optical path between the optical path changer and the objective lens and converts incident thereon light into parallel light.

10. The optical pickup of claim 1, wherein it is determined whether a power of the light measured by the monitoring photodetector is lower or higher than a reference value, and when a power of the light measured by the monitoring photodetector is one of lower and higher than the reference value, the power of the light source is controlled so that the power of the light measured by the monitoring photodetector is the reference value.

11. The optical pickup of claim 1, wherein focusing servo and tracking servo operations are performed using a light signal output by the signal detecting photodetector based at least partially on light reflected from the disc.

12. An optical pickup, in which a portion of light emitted from a light source is condensed onto a disc by an objective lens so that information is recorded on the disc, and light reflected from the disc is received by a signal detecting photodetector so that focusing servo and tracking servo operations are performable, comprising:

a grating which separates the light emitted from the light source which passes through an effective aperture thereof; and

a monitoring photodetector disposed on an optical path of at least a portion of the light traveling outside of the effective aperture and which measures a power of the at least a portion of the light traveling outside of the effective aperture.

13. The optical pickup of claim 12, wherein the monitoring photodetector is adjacent to an outer sidewall of the grating.

14. The optical pickup of claim 12, wherein the light source is a laser diode.

15. The optical pickup of claim 12, further comprising an optical path changer disposed between the grating and the objective lens and changes an optical path of light incident thereon.

16. The optical pickup of claim 15, further comprising a collimating lens which is disposed on an optical path between the optical path changing unit and the objective lens and makes incident light thereon into parallel light.

17. The optical pickup of claim 12, wherein the optical path changer is one of a beam splitter which reflects or transmits incident light by a ratio according to a reflective coating of the beam splitter and a polarized beam splitter which reflects or transmits incident light according to a polarization direction of the incident light.

18. The optical pickup of claim 12, wherein the signal detecting photodetector detects a focusing servo signal and a tracking servo signal form the received reflected light.

19. The optical pickup of claim 12, further comprising a stop which blocks light passing through a lateral portion of the grating.

20. The optical pickup of claim 12, wherein it is determined whether a power of the light measured by the monitoring photodetector is lower or higher than a reference value, and when a power of the light measured by the monitoring photodetector is one of lower and higher than the reference value, the power of the light source is controlled so that the power of the light measured by the monitoring photodetector is the reference value.

21. The optical pickup of claim 12, wherein focusing servo and tracking servo operations are performed using a light signal output by the signal detecting photodetector based at least partially on light reflected from the disc.

22. An optical recording and/or reproducing apparatus comprising:

a spindle motor which rotates a disc;

an optical pickup which is movably disposed in a radial direction of the disc and records information onto and/or reproduces information from the disc;

a driving unit which drives the spindle motor and the optical pickup; and

a controller which controls focusing servo operations and tracking servo operations of the optical pickup,

wherein the optical pickup includes

a light source which emits light,

a grating which separates a portion of the light emitted from the light source,

a monitoring photodetector disposed on an optical path of light traveling outside of an effective aperture of the grating and which monitors a power of the light incident thereon,

an optical path changer which changes an optical path of the light passed through the grating,

an objective lens light which condenses light reflected from the optical path changer on a disc, and

a signal detecting photodetector which receives the light reflected from the disc.

23. The optical recording and/or reproducing apparatus of claim 22, wherein the monitoring photodetector is adjacent to an outer sidewall of the grating.

24. The optical recording and/or reproducing apparatus of claim 22, further comprising a collimating lens which is disposed on an optical path between the optical path changing unit and the objective lens and converts incident light thereon into parallel light.

25. The optical pickup of claim 1, wherein focusing servo and tracking servo operations are performed using a light signal output by the signal detecting photodetector based at least partially on light reflected from the disc.

26. An optical recording and/or reproducing apparatus comprising:

a spindle motor which rotates a disc;

an optical pickup which is movably disposed in a radial direction of the disc and records information onto and/or reproduces information from the disc;

a driving unit which drives the spindle motor and the optical pickup; and

a controller which controls focusing servo operations and tracking servo operations of the optical pickup,

wherein the optical pickup includes

a light source which emits light,

a grating which separates a portion of the light emitted from the light source,

a reflecting member which reflects another portion of the light emitted from the light source,

a monitoring photodetector disposed on a traveling path of the light reflected from the reflecting member and which measures the reflected light,

an optical path changer which changes an optical path of the light separated by the grating,

an objective lens light which condenses the light the optical path of which is changed onto a disc, and

a signal detecting photodetector which receives the light reflected from the disc.

27. The optical pickup of claim 1, wherein focusing servo and tracking servo operations are performed using a light signal output by the signal detecting photodetector based at least partially on light reflected from the disc.

28. An optical pickup comprising:

a light source which emits light;

an optical path changer which changes an optical path of a portion of the light so as to direct the light toward an optical disc;

a monitoring photodetector disposed between the light source and the optical path changer and which detects another portion of the light; and

a signal detecting photodetector which receives the light reflected from the disc,

wherein optical noise reflected from the signal detecting photodetector is not read by the monitoring photodetector.

29. An optical pickup comprising:

a light source which emits light;

an optical path changer which changes an optical path of a portion of the light so as to direct the light toward an optical disc;

a monitoring photodetector disposed one of between the light source and the optical path changer and on an optical path of light reflected by a reflecting member disposed between the light source and the optical path changer and which detects another portion of the light; and

a signal detecting photodetector which receives the light reflected from the disc,

wherein optical noise reflected from the signal detecting photodetector is not read by the monitoring photodetector.